IN THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1 – 61 (Cancelled)

62. (Currently Amended) A gel polymer electrolyte for rechargeable batteries comprising:

(i) a gel polymer which is the reaction product of (A) a poly(2-vinyl-pyridine-co-styrene) ~~vinylpyridine~~ compound, and (B) an epoxy-group containing material, and

(ii) a liquid electrolyte which contains an amount of an ionic salt effective to achieve ionic conductivity of about 1 x10^{-2} S/cm or less.

63. (Currently Amended) The gel polymer electrolyte as in claim 62, wherein ~~the vinylpyridine compound (A) is poly(2-vinyl-pyridine-co-styrene), and~~ the epoxy-group containing material is butanediol diglycidyl ether.

64. (Cancelled)

65. (New) The gel polymer electrolyte of claim 62, wherein the ionic salt is a lithium salt.

66. (New) The gel polymer electrolyte of claim 65, wherein the lithium salt is at least one selected from the group consisting of $LiPF_6$, $LiAsF_6$, $LiClO_4$, $LiN(CF_3SO_2)_2$, $LiBF_4$, $LiCF_3SO_3$ and $LiSbF_6$.

67. (New) The gel polymer electrolyte of claim 62, wherein the ionic salt is present in an amount effective to achieve an ionic conductivity of between about 1 x 10^{-3} to about 1 x10^{-2} S/cm.

68. (New) The gel polymer electrolyte of claim 62, wherein material (B) is an epoxy-group containing material which is at least one selected from the group consisting of 3,4-epoxycyclohexylmethyl-3',4'-epoxycyclohexane carboxylate, glycidyl dodecafluoroheptylether, polypropylene glycol diglycidyl ether, glycidyl dodecafluoroheptylether, butadiene diepoxide,

butanediol diglycidyl ether, cyclo hexene oxide, cyclopentene oxide, diepoxy cyclooctane, ethylene glycol diglycidyl ether and 1,2-epoxy hexane.

69. (New) The gel polymer electrolyte of claim 62, wherein the gel polymer is present, based on the total weight of the gel polymer electrolyte, in an amount between about 1 wt.% to about 30 wt.%.

70. (New) The gel polymer electrolyte of claim 62 or 69, wherein the liquid electrolyte is present, based on the total weight of the gel polymer electrolyte, in an amount between about 30 wt.% to about 99 wt.%.

71. (New) The gel polymer electrolyte of claim 62, wherein the liquid electrolyte is present, based on the total weight of the gel polymer electrolyte, in an amount of about 95 wt.% or greater.

72. (New) A rechargeable battery comprising an anode, a cathode, a microporous separator separating said anode and said cathode, and a gel polymer electrolyte comprising:

(i) a gel polymer which is the reaction product of (A) a poly(2-vinyl-pyridine-co-styrene compound, and (B) an epoxy-group containing material, and

(ii) a liquid electrolyte which contains an amount of an ionic salt effective to achieve ionic conductivity of about 1 $x10^{-2}$ S/cm or less.

73. (New) The rechargeable battery of claim 72, wherein the epoxy-group containing material is butanediol diglycidyl ether.

74. (New) The rechargeable battery of claim 72, wherein the ionic salt is a lithium salt.

75. (New) The rechargeable battery of claim 74, wherein the lithium salt is at least one selected from the group consisting of LiPF6, LiAsF6, LiClO4, LiN(CF3SO2)2, LiBF4, LiCF3SO3 and LiSbF6.

76. (New) The rechargeable battery of claim 72, wherein the ionic salt is present in an amount effective to achieve an ionic conductivity of between about 1 x 10^{-3} to about 1 $x10^{-2}$ S/cm.

77. (New) The rechargeable battery of claim 72, wherein material (B) is an epoxy-group containing material which is at least one selected from the group consisting of 3,4-epoxycyclohexylmethyl-3',4'-epoxycyclohexane carboxylate, glycidyl dodecafluoroheptylether, polypropylene glycol diglycidyl ether, glycidyl dodecafluoroheptylether, butadiene diepoxide, butanediol diglycidyl ether, cyclo hexene oxide, cyclopentene oxide, diepoxy cyclooctane, ethylene glycol diglycidyl ether and 1,2-epoxy hexane.

78. (New) The rechargeable battery of claim 72, wherein the gel polymer is present, based on the total weight of the gel polymer electrolyte, in an amount between about 1 wt.% to about 30 wt.%.

79. (New) The rechargeable battery of claim 72 or 78, wherein the liquid electrolyte is present, based on the total weight of the gel polymer electrolyte, in an amount between about 30 wt.% to about 99 wt.%.

80. (New) The rechargeable battery of claim 72, wherein the liquid electrolyte is present, based on the total weight of the gel polymer electrolyte, in an amount of about 95 wt.% or greater.